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EXAMINER	
IM, JUNGHWA M	

ART UNIT	PAPER NUMBER
2811	

NOTIFICATION DATE	DELIVERY MODE
09/14/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USPTOMail@traskbritt.com

Office Action Summary	Application No.	Applicant(s)	
	09/942,245	JIANG, TONGBI	
	Examiner	Art Unit	
	Junghwa M. Im	2811	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,19-24,26-41 and 44-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,19-24,26-41 and 44-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-16, 19-24, 26-41 and 44-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (US 5,864,178), hereinafter Yamada in view of Hoge et al. (US 4,388,132).

Regarding claim 1, Fig. 54 of Yamada shows a semiconductor assembly comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a wetting agent layer (207, 208; a polymer layer excellent in wettability; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material

consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claims 2-4, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (co5. 4, lines1-6).

Regarding claim 5, Yamada discloses the wetting agent layer reduces surface tension of the active surface throughout the specification especially in col. 20, lines 34-65.

Regarding claim 6, Fig. 54 of Yamada shows a semiconductor assembly comprising:

a semiconductor device (or a die; 201) having an active surface;

a substrate (202) having an upper surface;

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a wetting agent layer (207, 208; a polymer layer excellent in wettability; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in

order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claims 7-9, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 10, Fig. 54 of Yamada shows a semiconductor assembly comprising:

a semiconductor device (or a die; 201) having an active surface;

a substrate (202) having an upper surface;

a wetting agent layer (207, 208; a polymer layer excellent in wettability; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in

order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claims 11-13, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 14, Fig. 54 of Yamada shows a semiconductor assembly comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a circuit board) having an upper surface having a plurality of circuits thereon;

a plurality of bumps (203) connecting said plurality of bond pads on said active surface of said semiconductor device to said plurality of circuits on said upper surface of said substrate;

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer);

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and

ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claim 15 and 19, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 16, Fig. 54 of Yamada shows an additional wetting layer on the upper surface of the substrate (208; col. 56, lines 22-63 and col. 17, lines 53-59).

Regarding claim 20, Fig. 54 of Yamada shows a semiconductor assembly comprising:

a semiconductor device (or a die; 201) having an active surface;

a substrate (202) having an upper surface;

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer).

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claim 21 and 22, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 23, Fig. 54 of Yamada shows a semiconductor assembly comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a circuit board) having an upper surface having a plurality of circuits thereon;

a plurality of bumps (203) connecting said plurality of bond pads on said active surface of said semiconductor device to said plurality of circuits on said upper surface of said substrate;

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer).

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claim 24, Fig. 54 of Yamada shows the underfill material substantially fills the gap between the semiconductor and the substrate.

Regarding claim 26, Fig. 54 of Yamada shows a semiconductor die comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a circuit board) having an upper surface;

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claims 27-29, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 30, Yamada discloses the wetting agent layer reduces surface tension of the active surface throughout the specification especially in col. 20, lines 34-65.

Regarding claim 31, Fig. 54 of Yamada shows a semiconductor die comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a circuit board) having an upper surface;

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36), said wetting layer having a thickness of a monolayer provided on the active surface of said semiconductor device/die (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claims 32-34, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 35, Fig. 54 of Yamada shows a semiconductor die comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a circuit board) having an upper surface;

a wetting agent layer (207, 208; a polymer layer excellent in wettability; col. 54, lines 34-36 located on the active surface of said semiconductor device/die (207).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention.

Regarding claims 36-38, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 39, Fig. 54 of Yamada shows a semiconductor die comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a wiring circuit board) having an upper surface having a plurality of circuits;

a plurality of bumps (203) connecting said plurality of bond pads on said active surface of said semiconductor device to said plurality of circuits on said upper surface of said substrate;

said plurality of bumps forming a gap between said semiconductor device and said substrate;

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer);

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207) and on a upper surface of substrate (208; col. 56, lines 22-63 and col. 17, lines 53-59).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention

Regarding claims 40 and 44, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 41, Fig. 54 of Yamada shows the underfill material substantially fills the gap between the semiconductor and the substrate.

Regarding claim 45, Fig. 54 of Yamada shows a semiconductor die comprising:

a semiconductor device (or a die; 201) having an active surface;

a substrate (202; a wiring circuit board) having an upper surface;

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer);

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207) and on a upper surface of substrate (208; col. 56, lines 22-63 and col. 17, lines 53-59).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention

Regarding claims 46-47, Hoge discloses a wetting agent layer include at least one layer of glycidoxypropyltinethoxysilane (col. 5, lines 1-6).

Regarding claim 48, Fig. 54 of Yamada shows a semiconductor die comprising:

a semiconductor device (or a die; 201) having an active surface having a plurality of bond pads (224);

a substrate (202; a wiring circuit board) having an upper surface having a plurality of circuits;

a plurality of bumps (203) connecting said plurality of bond pads on said active surface of said semiconductor device to said plurality of circuits on said upper surface of said substrate;

said plurality of bumps forming a gap between said semiconductor device and said substrate;

an underfill material (encapsulation resin; col. 56, lines 20-26) to fill the gap between said substrate and said semiconductor device (or between the substrate and the wetting agent layer);

a wetting agent layer (207, 208; a polymer layer excellent in wettability ; col. 54, lines 34-36) provided on the active surface of said semiconductor device (207) and on a upper surface of substrate (208; col. 56, lines 22-63 and col. 17, lines 53-59).

Fig. 54 of Yamada shows most aspects of the instant invention except a wetting agent layer "selected from the group consisting of glycidoxypropyltinethoxysilane and

ethyltrimethoxysilane." Hoge discloses a wetting agent/coupling agent comprising glycidoxypropyltinethoxysilane to enhance the adhesion (col. 4, line 63 - col. 5, line 6).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the teachings of Hoge for the wetting agent layer/coupling agent layer of Yamada in order to have to the wetting agent layer comprised of a layer of solely silane-based material consisting of glycidoxypropyltinethoxysilane and ethyltrimethoxysilane to promote the adhesion through utilizing a coupling material well known in the industry.

In addition, the wetting layer formed with the combined teachings of Yamada and Hoge would not undergo substantial degradation during a curing process since it is formed of the same material to the one recited in the instant invention

Regarding claim 49, Fig. 54 of Yamada shows the underfill material substantially fills the gap between the semiconductor and the substrate.

Response to Arguments

Applicant's arguments with respect to pending claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Junghwa M. Im whose telephone number is (571) 272-1655. The examiner can normally be reached on MON.-FRI. 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne A. Gurley can be reached on (571) 272-1670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Junghwa M. Im
Examiner
Art Unit 2811

jmi
8/23/2007